## Claims

- A method of evaluating acute aortic dissection, which comprises measuring a D-dimer concentration in blood
   separated from a human, and determining whether or not acute aortic dissection has developed, on the basis of the measured concentration.
- 2. A method of evaluating acute aortic dissection, which 10 comprises measuring a D-dimer concentration in blood separated from a human, and determining whether or not Stanford type A acute aortic dissection has developed, on the basis of the measured concentration.
- 15 3. A method of evaluating acute aortic dissection, which comprises measuring a D-dimer concentration in blood separated from a human, and determining whether or not Stanford type B acute aortic dissection has developed, on the basis of the measured concentration.

20

- 4. A method of evaluating acute aortic dissection, which comprises measuring a D-dimer concentration in blood separated from a human developing acute aortic dissection, and determining whether the developed acute aortic dissection is Stanford type A acute aortic dissection or Stanford type B acute aortic dissection, on the basis of the measured concentration.
- 5. A method of distinguishing between acute aortic

  30 dissection and acute myocardial infarction, which
  comprises measuring a D-dimer concentration in blood
  separated from a human having an episode of chest pain,
  and determining which disease has developed whether
  acute aortic dissection or acute myocardial infarction,

on the basis of the measured concentration.

- 6. The distinguishing method of claim 5, which comprises comparing the measured D-dimer concentration in blood

  5 and a D-dimer cutoff value in blood which is preestablished between acute aortic dissection and acute myocardial infarction, and determining that acute aortic dissection has developed if said concentration is not lower than said cutoff value, and acute myocardial

  10 infarction has developed if said concentration is lower than said cutoff value.
- 7. A method of distinguishing between acute aortic dissection and acute myocardial infarction, which

  15 comprises measuring a D-dimer concentration in blood separated from a human having an episode of chest pain, and determining which disease has developed whether Stanford type A acute aortic dissection, Stanford type B acute aortic dissection, or acute myocardial infarction,

  20 on the basis of the measured concentration.
- 8. The evaluation method for acute aortic dissection of any of claims 1 to 4, wherein the measurement of D-dimer concentration in blood is performed by an immunochemical method.
- 9. The evaluation method of claim 8, wherein the immunochemical method is an enzyme immunochemical method, a latex aggregation method, or an immunochromatography 30 method.
  - 10. The method of distinguishing between acute aortic dissection and acute myocardial infarction of any of claims 5 to 7, wherein the measurement of D-dimer

concentration in blood is performed by an immunochemical method.

- 11. The distinguishing method of claim 10, wherein the immunochemical method is an enzyme immunochemical method, a latex aggregation method, or an immunochromatography method.
- 12. A reagent for evaluating acute aortic dissection,
  10 which comprises an antibody that recognizes a D-dimer.
  - 13. The evaluation reagent of claim 12, which is a reagent for evaluating Stanford type A acute aortic dissection.

15

- 14. The evaluation reagent of claim 12, which is a reagent for evaluating Stanford type B acute aortic dissection,
- 20 15. A reagent for distinguishing between Stanford type A acute aortic dissection and Stanford type B acute aortic dissection, which comprises an antibody that recognizes a D-dimer.
- 25 16. The reagent of any of claims 12 to 15, wherein the antibody is a monoclonal antibody.
- 17. A reagent for distinguishing between acute aortic dissection and acute myocardial infarction, which comprises an antibody that recognizes a D-dimer.
  - 18. The distinguishing reagent of claim 17, which is a reagent for distinguishing between Stanford type A acute aortic dissection and acute myocardial infarction.

19. The distinguishing reagent of claim 17, which is a reagent for distinguishing between Stanford type B acute aortic dissection and acute myocardial infarction.

5

20. The distinguishing reagent of claim 17, which is a reagent for distinguishing among Stanford type A acute aortic dissection, Stanford type B acute aortic dissection, and acute myocardial infarction.

10

- 21. The distinguishing reagent of any of claims 17 to 20, wherein the antibody is a monoclonal antibody.
- 22. A commercial package comprising the reagent of any of claims 12 to 15 and a printed matter on the reagent, wherein the printed matter and/or the package bears the statement that the reagent can be used, or should be used, for the purpose of evaluating acute aortic dissection.

20

infarction.

- 23. A commercial package comprising the distinguishing reagent of any of claims 17 to 20 and a printed matter on the reagent, wherein the printed matter and/or the package bears the statement that the reagent can be used, or should be used, for the purpose of distinguishing between acute aortic dissection and acute myocardial
- 24. Use of an antibody that recognizes a D-dimer, for 30 producing a reagent for evaluating acute aortic dissection.
  - 25. Use of an antibody that recognizes a D-dimer, for producing a reagent for distinguishing between acute

aortic dissection and acute myocardial infarction.